**DEMOTO** et al. Serial No. 09/901,125 Response to Office Action dated January 6, 2005

## **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

## **Listing of Claims:**

Claim 1 (Currently Amended): A communication system comprising: an information server capable of performing communication in first and second communication modes; and

a communication apparatus capable of performing communication in the first and the second communication modes, the communication apparatus including:

communication <u>circuitry</u> means capable of performing communication with the information server in the first and the second communication modes;

a connection information storage section for storing a communication connection condition as connection information; and

a communication mode switching control section for controlling the switching of communication mode with the information server from the first communication mode to the second communication mode by storing into the connection information storage section connection information based on such that, upon reception of a request of information acquisition in the second communication mode from an operator when the communication means is connected with the information server in the first communication mode, a condition of communication connection of the communication apparatus and with the information server in the first communication of the information acquisition request is stored into the connection information storage section as connection information; switching of communication mode from the first communication mode to the second communication mode is carried out by releasing the connection of the communication circuitry means with the information server in the first communication mode, and establishing a connection with the information server in the second communication mode, and restoring the condition of communication connection is restored based on the stored connection information storage section.

Claim 2 (Currently Amended): The communication system of claim 1, wherein the communication apparatus <u>further</u> includes a switching condition storage section for storing a <u>predetermined</u> determination reference value, and wherein the communication mode switching control section compares an amount of information to be acquired from the information server and the determination reference value <u>previously stored in the switching condition storage</u> section, and determines whether <u>or not</u> to execute switching of communication mode <del>or not,</del> based on a result of the comparison.

Claim 3 (Currently Amended): The communication system of claim 1, wherein the communication mode switching control section determines whether <u>or not</u> to execute <u>the</u> switching of communication mode <u>or not</u> based on a kind of information to be acquired from the information server.

Claim 4 (Currently Amended): The communication system of claim 1, wherein the communication apparatus <u>further</u> includes a switching condition storage section for storing a communication charge for communication connection time in each of the first and the second communication modes, and

wherein when an information acquisition request is received from the operator, the communication mode switching control section measures a communication connection time necessary for acquiring the requested information in each of the first and the second communication modes mode, and determines whether or not to execute the switching of communication mode or not based on the measured communication connection times and the communication charges for the communication connection times in the first and the second communication modes, respectively, previously stored in the switching condition storage section.

Claim 5 (Currently Amended): The communication system of claim 1, wherein the communication apparatus <u>further</u> includes a switching condition storage section for storing a <u>predetermined</u> time, and

wherein the communication mode switching control section compares a current time and the predetermined time stored in the switching condition storage section, to determine

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whether or not to execute the switching of communication mode or not.

Claim 6 (Currently Amended): The communication system of claim 1, wherein the communication mode switching control section determines whether <u>or not</u> to execute switching of communication mode <u>or not</u>, based on <u>an</u> the operator's operation.

Claim 7 (Original): The communication system of claim 1, wherein when a communication mode switching instruction is received from the information server, the communication mode switching control section switches the communication mode, based on the switching instruction.

Claim 8 (Currently Amended): The communication system of claim 7, wherein the communication apparatus transmits to the information server a signal representative of whether or not to transmit the communication mode switching instruction from the information server to the communication apparatus or not, based on an the operator's operation.

Claim 9 (Currently Amended): The communication system of claim 1, wherein when the communication mode switching instruction is received from the information server, the communication mode switching control section determines whether <u>or not</u> to follow the communication mode switching instruction from the information server <u>or not</u>, based on <u>an the</u> operator's operation.

Claim 10 (Currently Amended): A communication system comprising: an information server capable of performing communication in first and second communication modes; and

a communication apparatus capable of performing communication in the first and the second communication modes, the communication apparatus including:

communication <u>circuitry</u> means capable of performing communication with the information server in the first and the second communication modes;

a connection information storage section for storing a communication connection condition as connection information;

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a switching condition storage section for storing a <del>predetermined</del> reference value of an information transfer rate; and

a communication mode switching control section for, when the communication circuitry means is acquiring information from the information server in the first communication mode, monitoring a rate of information transfer from the information server, comparing the monitored information transfer rate being monitored and the reference value of the information transfer rate previously stored in the switching condition storage section, and in cases in which where the monitored information transfer rate being monitored does not exceed the reference value, storing connection information in the connection information storage section based on a condition of communication connection of the communication apparatus and with the information server at that time into the connection information storage section as the connection information, disconnecting the communication in the first communication mode, establishing a connection with the information server in the second communication mode to perform switching of communication mode, and restoring the communication connection condition based on the stored connection information storage section when the communication in the first communication mode is disconnected.

Claim 11 (Currently Amended): A communication system comprising: an information server capable of performing communication in first and second communication modes; and

a communication apparatus capable of performing communication in the first and the second communication modes,

the information server including:

communication <u>circuitry</u> means capable of performing communication with the communication apparatus in the first and the second communication modes;

a switching condition storage section for storing a <del>predetermined</del> reference value of an information transfer rate; and

a communication mode switching control section for, when the communication <u>circuitry</u> means is transferring information to the communication apparatus in the first communication mode, monitoring the information transfer rate, comparing the <u>monitored</u> information transfer rate <u>being monitored</u> and the reference value of the information transfer rate previously stored in

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the switching condition storage section, and in cases where the <u>monitored</u> information transfer rate being monitored does not exceed the reference value, causing the communication <u>circuitry</u> means to transmit a communication mode switching instruction to the communication apparatus, and

the communication apparatus including:

communication <u>circuitry</u> means capable of performing communication with the information server in the first and the second communication modes;

a connection information storage section for storing a communication connection condition as connection information; and

a communication mode switching control section for, when the communication <u>circuitry</u> of the communication apparatus <u>means</u> receives the communication mode switching instruction, causing <u>connection</u> information to be stored in the connection information storage section based on a condition of communication connection <u>of the communication</u> apparatus and <u>with</u> the information server at that time to be stored in the connection information storage section as the eonnection information, based on the switching instruction, disconnecting the communication in the first communication mode, establishing a connection with the information server in the second communication mode to perform switching of communication mode, and restoring the communication connection condition based on the <u>stored</u> connection information stored when the communication in the first communication mode is disconnected.

Claim 12 (Currently Amended): The communication system of claim 1, wherein after the information acquisition in the second communication mode is completed, the communication mode switching control section automatically disconnects the communication in the second communication mode, and establishes a connection with the information server in the first communication mode to perform switching of communication mode.

Claim 13 (Currently Amended): The communication system of claim 1, wherein after the information acquisition in the second communication mode is completed, the communication mode switching control section receives a the communication mode switching instruction from the information server, automatically disconnects the communication in the second communication mode[[,]] based on the instruction from the information server, and again

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establishes a connection with the information server in the first communication mode to perform switching of communication mode.

Claim 14 (Currently Amended): The communication system of claim 1, wherein after a specified predetermined time has elapsed since the information acquisition in the second communication mode is completed, the communication mode switching control section automatically disconnects the communication in the second communication mode, and again establishes a connection with the information server in the first communication mode to perform switching of communication mode.

Claim 15 (New): A communication apparatus for communicating with an information server using different communication modes, the communication apparatus comprising:

a communication section for establishing communications with the information server in the different communication modes;

a storage section; and

a communication mode switching control section for controlling the switching of communication modes with the information server by storing connection information into the storage section based on a communication connection condition of the communication apparatus and the information server in a current communication mode, releasing the communication connection with the information server, and establishing a communication connection with the information server in another communication mode and restoring the communication connection condition based on the stored connection information.

Claim 16 (New): The communication apparatus of claim 15, wherein the connection information comprises a uniform resource locator (URL).

Claim 17 (New): The communication apparatus of claim 15, wherein the communication section, the storage section and the communication mode switching control section are embodied in a portable terminal.

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Claim 18 (New): The communication apparatus of claim 15, wherein the communication mode switching control section controls the switching based on an instruction signal from the information server.

Claim 19 (New): The communication apparatus of claim 15, wherein the communication mode switching control section controls the switching based on a comparison between an amount of data to be acquired from the information server and a reference amount of data.

Claim 20 (New): The communication apparatus of claim 15, wherein the communication mode switching control section controls the switching in accordance with a type of information to be acquired from the information server.

Claim 21 (New): The communication apparatus of claim 15, wherein the communication mode switching control section controls the switching based at least in part on communication charges.

Claim 22 (New): The communication apparatus of claim 15, wherein the communication mode switching control section controls the switching based on a comparison between a current time and a specified time.

Claim 23 (New): The communication apparatus of claim 15, wherein the communication mode switching control section controls the switching based at least in part on an operator's instruction.